



## USER MANUAL

# UG4000 SERIES

## AUTOMATIC SPRAY GUN CLEANERS

UG4000D, UG4000E, UG4500E,  
UG4000FS



UNI-RAM CORPORATION • ONTARIO • CANADA

## INTRODUCTION

Uni-ram holds many patents on designs used in its innovative products. Every machine is tested for compliance with Quality Assurance standards. Follow the directions in this manual under Setup, Operation and Maintenance in order to operate this machine safely and effectively. Not following these instructions can lead to malfunction or damage to the machine. Ensure that the manual is readily available for the operator at all times. If you have any questions about the operation of this machine, call your distributor or a Uni-Ram Service Engineer.

North America: Uni-ram Technical Service

1-800-417- 9133

Other Continents: Contact Your Supplier

## FEATURE COMPARISON BY MODEL

MODEL	4000D	4000E	4500E	4000FS
HOSE CLEANING			YES	
MANUAL WASH SPIGOT				YES
COMBO READY		YES	YES	
WASH SOLVENT PAIL	INCL	INCL	INCL	INCL
RINSE SOLVENT PAIL	REQUIRED, NOT INCLUDED	INCL	INCL	REQUIRED, NOT INCLUDED
OVERFLOW TUBE AND RISER	NOT INCLUDED	INCL	INCL	NOT INCLUDED
SHIPPING SIZE (WDH)	28 X 17 X 42 inches 71 X 43 X 107 cm			
SHIPPING WEIGHT (LB / KG)	90 / 41	91 / 41.3	93 / 42.3	90 / 41

## COMMON FEATURES

- Automatic Wash, Automatic Air Flush, Automatic Solvent Rinse, Automatic Fume Venting
- Fume Vent Control
- Manual Rinse with Flow-through Brush including separate Brush Flow Control
- Clean 2 Spray Guns and 2 Pots at the same time
- 14 Cleaning Jets with swirl action
- Shipping Size and Weight: 28 x 17 x 42" (WDH)

## CAUTIONS AND WARNINGS

- Always disconnect this machine from power sources before performing maintenance
- **Do not smoke or use near open flames, sparks or heat.**
- **Make sure all ground wires are connected and that unit itself is grounded properly.**

## SETUP

### DELIVERY INSPECTION

- Inspect the shipping carton for any sign of transport damage. Carefully remove the unit from the shipping carton and check the unit for damage. Report any transport damage immediately to the carrier and your vendor. Initiate a freight claim with the carrier. The manufacturer is not responsible for the freight damage.
- Make sure the bag of accessories contains the following:
- Manual
- Kit-Plug, Guns w. Trigger Lock Springs, 2 pieces (Part No. 140-2340)
- Nozzle Adapters:
  - 110-430 Push-on, conventional systems only
  - 110-430PPS Push-on, disposable cup or conventional systems

Note: Adapter #780-3530 is installed for use with disposable cup system only

### LOCATION

Position in a well-ventilated area away from sparks, heat and open flames.

### LEVELING AND AIR SUPPLY

- Level the machine using the adjustable legs.
- Attach an air supply adapter (not supplied) to the Air Inlet.

The air supply pressure must be at least 85 PSI and the air must be free from contaminants such as water, dust, rust, tar, grease etc.

To prevent damage to the Diaphragm Pump an internal Air Pressure Regulator has been installed to limit the air pressure to precisely 85 PSI. Do not install a second air pressure regulator or use a pressure set below 85 PSI.

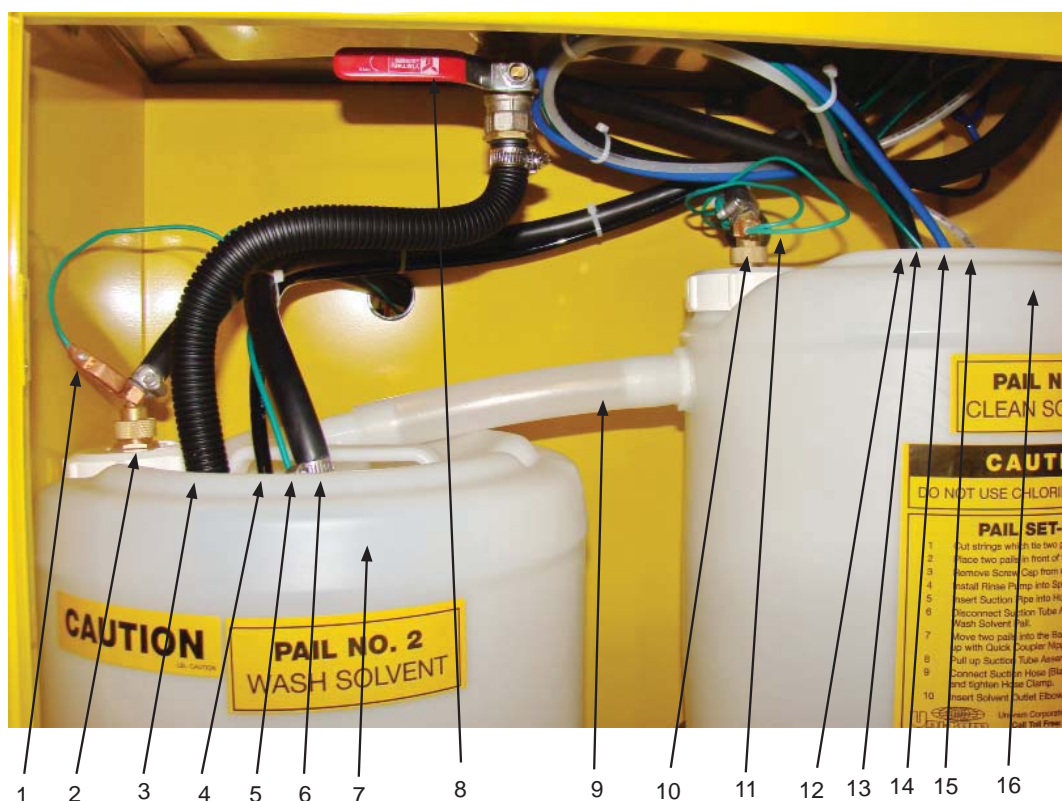
### SOLVENT SELECTION

The adhesion quality of automotive paint has dramatically improved in recent years. The choice of solvent is critical. Only use good quality solvent that is formulated for your paint and intended for use with automatic spray guns cleaners.

**PAIL SETUP**

- The Combo Ready units (UG4000E and UG4500E) come with the pails already installed as shown. Transfer Hoses are provided with Uni-ram Solvent Recyclers designed for Combo operation. The UG4000D and UG4000FS come with one pail and no Riser or Overflow Tube. The second Pail must be provided by the user. The Riser and the Overflow Tube are not needed for stand alone operation.
- Fill the Wash Pail (PAIL NO. 2) with about 3 Gal (11 L) of clean solvent.
- Fill the Rinse Pail (PAIL NO. 1) with about 5 Gal (19 L) of clean solvent (about 1" below the overflow pipe).
- Make sure the Drain Valve is open (handle in vertical position).

## PAIL SETUP UG4000 AND ABOVE



ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	GROUND WIRE, TRANSFER HOSE (COMBO-READY UNITS ONLY, SUPPLIED WITH EP2-TYPE SOLVENT RECYCLER)	9	OVERFLOW TUBE (COMBO-READY UNITS ONLY)
2	OUTGOING TRANSFER CONNECTION (FOR USE IN COMBINATION WITH A SOLVENT RECYCLER)	10	INCOMING TRANSFER CONNECTION (FOR USE IN COMBINATION WITH A SOLVENT RECYCLER)
3	DRAIN HOSE	11	GROUND WIRE, TRANSFER HOSE (COMBO-READY UNITS ONLY, SUPPLIED WITH EP2-TYPE SOLVENT RECYCLER)
4	PICKUP TUBE, FLOW-THROUGH BRUSH	12	PICKUP TUBE, AUTO RINSE (CONNECTED TO RINSE PUMP - NOT SHOWN)
5	GROUND WIRE	13	GROUND WIRE
6	PICKUP TUBE, AUTO WASH	14	AIR SUPPLY, RINSE PUMP
7	WASH PAIL (PAIL NO. 2)	15	PICKUP TUBE, WASH SPIGOT (UG6000-UG7500)
8	DRAIN VALVE (RED HANDLE)	16	RINSE PAIL (PAIL NO. 1)

**CAUTION: MAKE SURE ALL GROUND WIRES ARE SECURELY CONNECTED AND THAT THE GROUND WIRE AT THE BACK OF THE CABINET IS ALSO CONNECTED TO AN EXTERNAL GROUNDED OBJECT.**

## OPERATION

- To activate the Fume Vent during use, turn the lever labelled "Air Vent" to the open (vertical) position.

## PRE - CLEAN

- Disconnect the spray gun from the air hose. Pour paint from the cup (when present) into a 5 gallon pail (not supplied).
- Rinse cup with solvent and pour into the same 5 gallon pail for later disposal or recycling.

## CLEANING SPRAY GUNS AND CUPS

- Loosen the air cap of the spray gun two full turns.
- Lock the trigger in the open position with the Trigger Lock Spring.
- To prevent liquid from entering the air passgae during automatic cleaning, insert the white plastic Air Passage Plug into the Spray Gun's air inlet. If the air inlet has a male threaded connector instead of a quick connect use the knurled nut attached to the Trigger Clamp (included).
- Place spray guns facing corner jets. Placement depends on type of spray gun. See pictures below. Place cups onto the low spray jets and cup holders.

Note: Gravity Feed Spray Gun: Some customers prefer to clean the cup separate from the spray gun.

- Close the lid and turn the "Auto Wash Timer" knob clockwise to start cleaning. The cleaning cycle takes about 60 seconds
- Push and hold the "Air Rinse" button for about 3 second to air-rinse the guns.
- Push and hold the "Clean Rinse" button for about 5 seconds to rinse guns with clean solvent. This will send a pre-set amount of clean solvent (100 cc) through the jets. Wait 30 seconds for the Rinse Pump to fully recharge before repeating.

The solvent flow per clean-rinse cycle is limited to 100 cc to minimize consumption. This quantity is usually sufficient to clean the inside passages of the spray guns.



## FUME VENT CONTROL

The Vent Control on the right side can be used to turn the Vent off when the unit is not being used.

## MANUAL WASH

- If you have the UG4000FS model, make sure the Brush ON/OFF handle (front) is in the ON position.
- Open the lid and step on the foot pedal. A dedicated pump delivers wash solvent through the brush. when the foot pedal is depressed. To control the flow of solvent through the Brush, adjust the Flow Control, also on the front of the unit.

## MANUAL RINSE (UG4000FS)

- Place the Brush ON/OFF handle (front) in the OFF position.
- Open the lid and step on the foot pedal. A venturi delivers clean rinse solvent through the fixed spigot when the foot pedal is depressed.

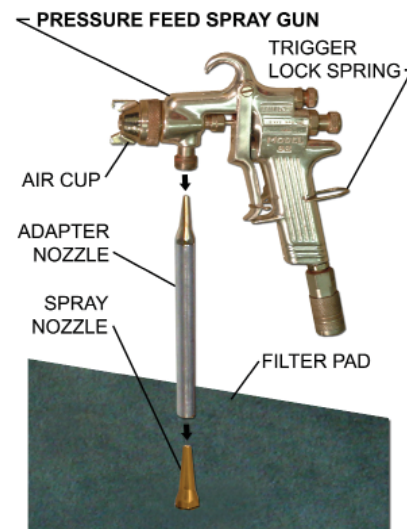
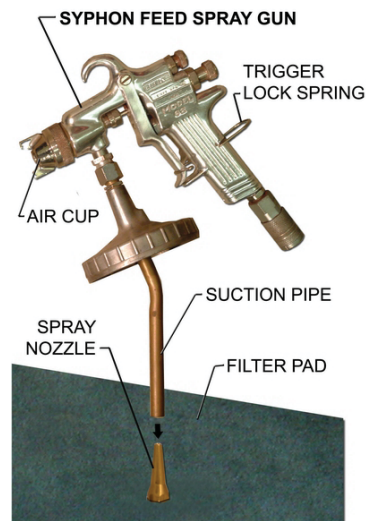
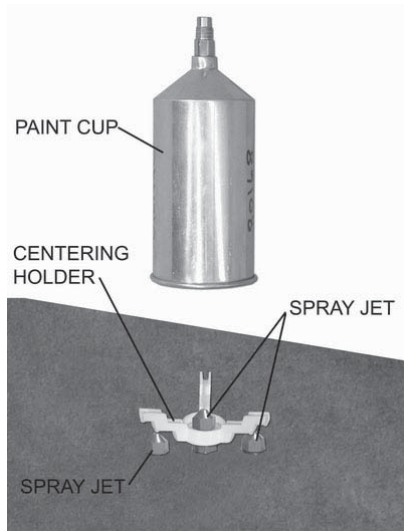
## HOSE CLEANING (UG4500E)

- This model can be used to clean a paint feeder hose up to 100 feet (30 m) long. Connect the hose to the two fittings, one on the front and one on the right side. Rotate the "Mode Selector" handle to the horizontal position and turn the Timer knob clockwise to start the automatic cleaning cycle.
- To air-rinse the hose, push and hold the "Air Rinse" button.

- To rinse the hose with clean solvent, push and hold the "Clean Rinse" button for about 5 seconds. This will use about 100 cc of clean solvent. **Wait 30 seconds for the Rinse Pump to fully recharge before repeating.**
- **Disconnect the hose.**

## MAINTENANCE

- Inspect the filter pad located in the tank of the gun cleaner and clean it if there is a build up of paint debris. Clean by removing the filter pad and washing away paint particles with clean solvent. Replace the filter pad when damaged or when solvent cannot drain.
- Inspect the screen, located below the filter pad and clean when necessary.
- Replace the dirty solvent as needed.





**TROUBLESHOOTING**

<b>SYMPTOM</b>	<b>REASON</b>	<b>CORRECTIVE ACTION</b>
WASH LIQUID DOES NOT FLOW AND PUMP MAKES A PUMPING NOISE	Drain valve closed	Open drain valve (put in vertical position), if not already open. Check wash liquid level. Add liquid if less than 1/2 full.
	Liquid level too low	Check wash liquid level. Add liquid if less than 1/2 full.
	Debris in pump	Follow Procedure 1, "Blocked Fluid Passage in Diaphragm Pump"
WASH LIQUID DOES NOT FLOW AND PUMP MAKES A HISSING NOISE	Water in air line causes pump to stall	Follow Procedure 2, "Blockage in Air Passage in Diaphragm Pump"
WASH LIQUID DOES NOT FLOW AND PUMP DOES NOT MAKE A NOISE	Pump leaks	Replace pump
	Blockage in air passage	Follow Procedure 3, "Blocked Passage in Air Line".
PUMP DOES NOT STOP UNLESS TIMER IS TURNED BY HAND OR AIR IS SHUT OFF	Defective Timer	Replace Timer.
TIMER KNOB SPINS BACK WHEN TURNED	Defective Timer	Replace Timer.
INSIDE WALL OF TANK IS COATED WITH PAINT EVEN THOUGH OPERATOR MAINTAINS TANK	Solvent lacks cleaning strength	Replace solvent with solvent that is formulated for type of paint used and for use with automatic spray gun cleaning
GUNS NOT CLEAN, PUMP WORKING, SOLVENT FLOW NORMAL	Trigger not locked in open position	Use Trigger Lock Spring
	Spray gun is not properly installed on to nozzle	Re-install with proper adapter
	Incompatible solvent	Replace incompatible solvent with solvent formulated for type of paint used and for Automatic Spray Gun Cleaners
	Low pressure in air supply	Increase air pressure to a minimum of 85 PSI
	Plugged jets	Remove and clean by blowing air through the jets. If not successful, replace.
GUNS NOT CLEAN, WASH SOLVENT IS MILKY WHITE	Wash solvent is contaminated with water	Replace or recycle wash solvent



**TROUBLESHOOTING**

CLEAN RINSE DOES NOT WORK	Not enough solvent in clean rinse pail (right side)	Add solvent
	Rinse Pump is leaking from a crack caused by corrosion due to acidic or chlorine-contaminated solvent	Replace rinse pump
	Clean Rinse Air Valve is defective	Follow Procedure 3 , Blockage in Air Line for air rinse valve only.
CLEAN RINSE IS DIRTY	Faulty Combination Valve	Replace Combination Valve.

## TROUBLESHOOTING PROCEDURES

### PROCEDURE 1

#### Blocked Fluid Passage In Diaphragm Pump

If the pump sounds like it is working but liquid does not flow, clear the fluid passage as follows:

- Remove suction tube from the pail and blow air at 85 PSI into the INLET Liquid Hose (see diagram). Step on foot pedal to activate pump. This procedure may have to be repeated several times. If this procedure does not help, blow some water into the suction hose using a spray gun, wait one minute and step on foot pedal to activate pump. This procedure may have to be repeated several times. If this procedure does not work, the pump must be replaced.

If you need to replace the pump call your local dealer.

The warranty on the diaphragm pump is two years from date of purchase.

This procedure will also clear a blockage in the fluid line for the brush. Follow the same procedure to clear a blockage in the automatic nozzle except turn the timer instead of stepping on the foot pedal.



### PROCEDURE 2

#### Blocked Air Passage In Diaphragm Pump

If there is a steady hissing sound and the pump is not cycling, the spool valve has stalled due to a blocked air passage. Follow the procedure below to clear the blockage.

- Connect a blow gun to an 85 PSI source. Locate the blue hose that extends from the air exhaust port of the diaphragm pump. Use a blow gun to blow air into the open end of this hose. Turn timer. If the procedure is successful, the pump will start working. The procedure may have to be repeated several times. If this procedure does not work, replace the pump.
- Cause:** Contaminants in the air supply (water, oil, solid particles etc)
- Preventative Action:** If necessary, install an Airline (Moisture) Filter.



### PROCEDURE 3

#### Blocked Passage in Air Line

The components in the air line are the **diaphragm pump, air valve, foot pedal, 3-way ball valve and regulator**. See the **Flow Diagram** and the section: **Replacement Parts**.

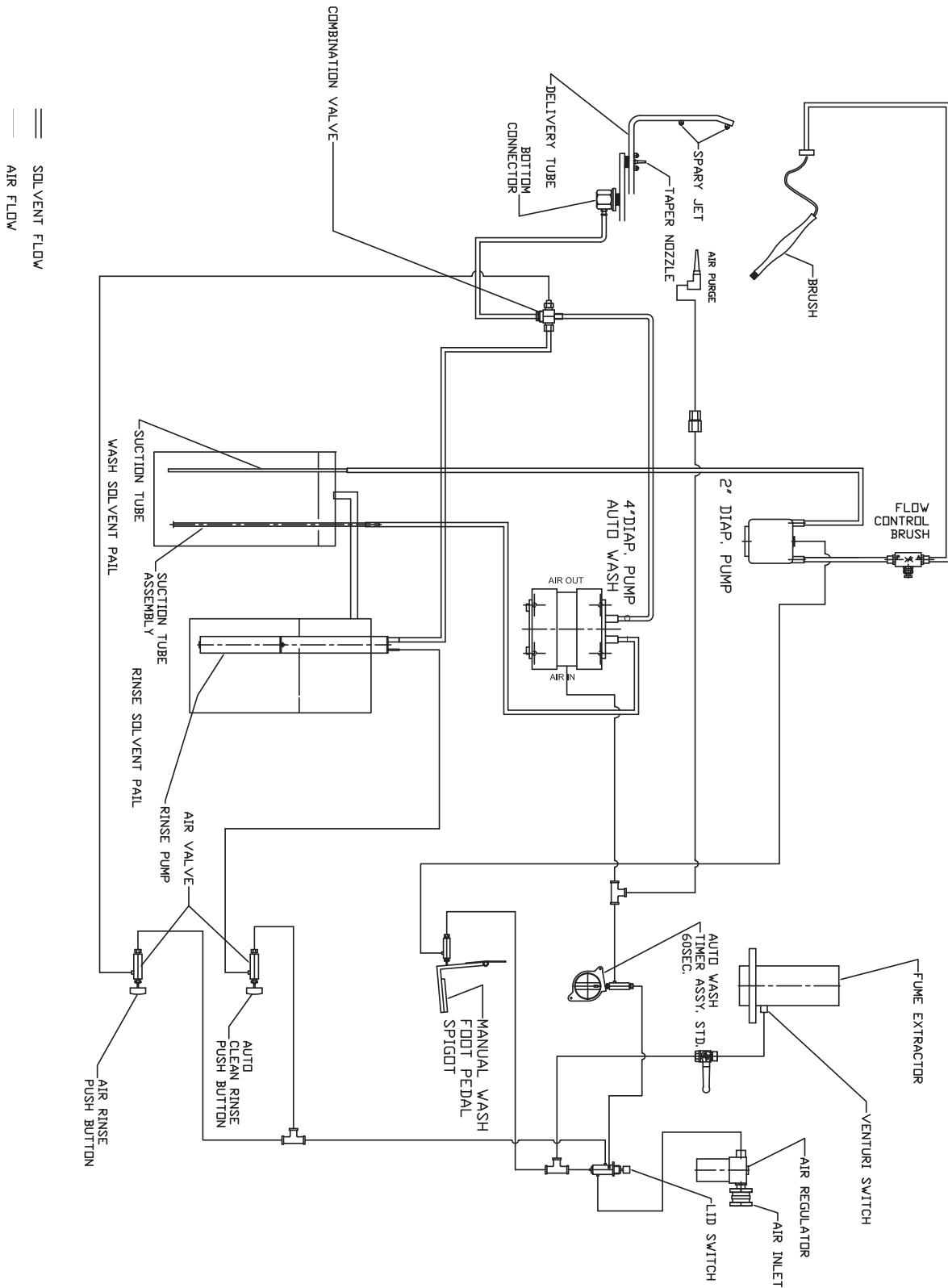
To troubleshoot a component:

- 1) Disconnect the air line to the component using the quick disconnect.
- 2) Step on foot pedal and check for presence of positive air pressure in the air line. If there is ample positive air pressure, replace the component.

If air pressure is absent, there is a faulty component upstream. Reconnect the air line and check the operation of the next component upstream by following steps 1 and 2 above.

## UG4000E FLOW DIAGRAM

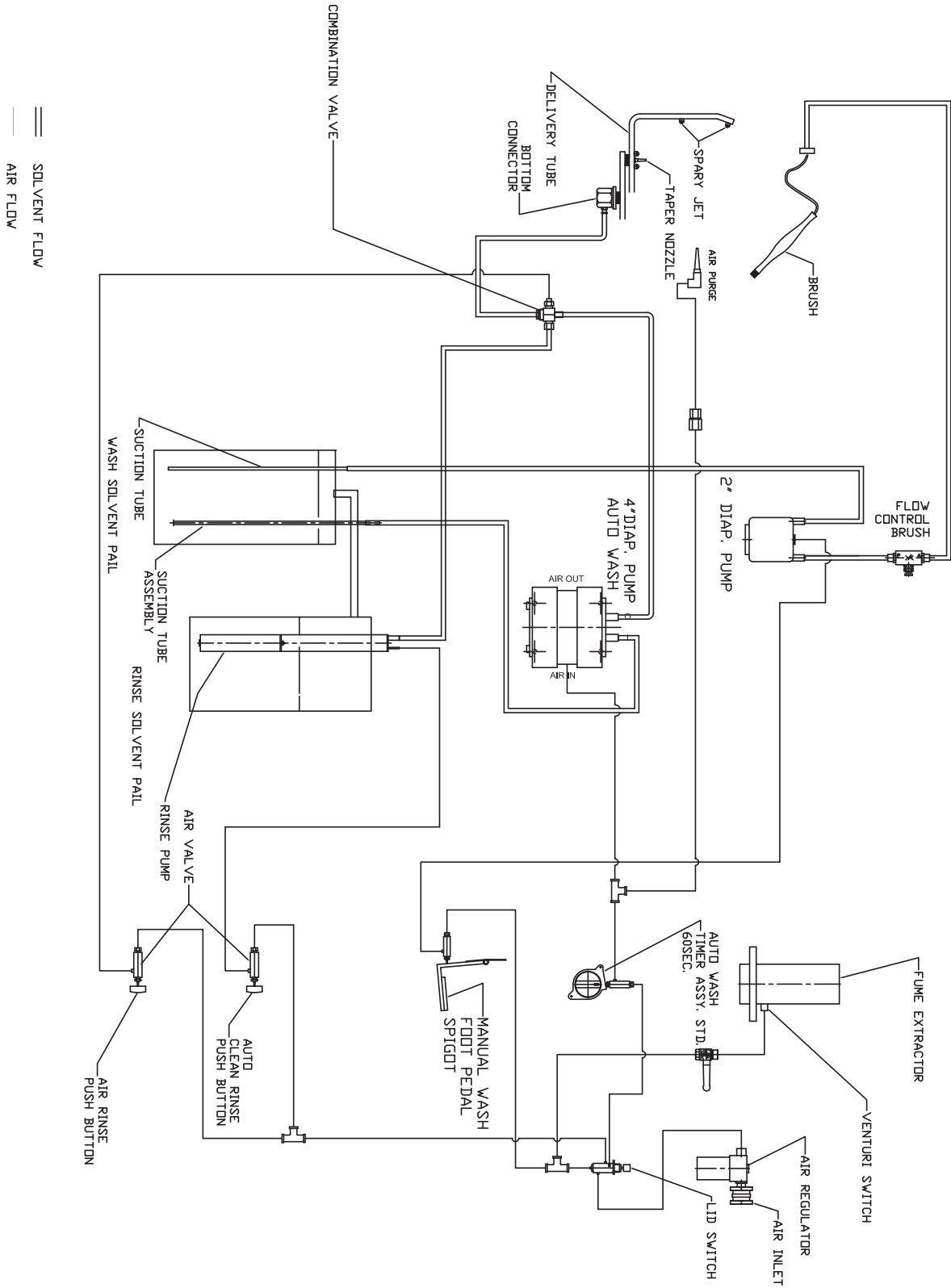
Use the diagram to trace the flow of compressed air and solvent.



FD-UG4000E-A

UG4000FS FLOW DIAGRAM

Use the diagram to trace the flow of compressed air and solvent.



FD-UG4000E-A

## REPLACEMENT PARTS

Part No.	Description
110-430	Nozzle Adapter, Push On, Conventional Systems Only
110-430PPS	Nozzle Adapter, Push On, Disposable and Conventional Systems
780-3530	Nozzle Adapter, Disposable Cup Systems Only
100-413F	Paint Cap Holder
115-200/K	Mechanical Timer Assembly, 5 minutes
140-230	Air Passage Plug
140-2340	Trigger Clamp & Plug Kit
144-399	Flow-Through Brush
144-390	Flow-Through Brush with Hose and Fittings
144-397	Hose for Flow-Through Brush
100-835	Ground Wire for Gun Cleaner, 18G, Green, 4 FT
FP6500-10	Filter Pad, UG4000, Pkg of 10
780-8000	2-Pail Set with overflow tube etc (does not include Hoses & Fittings for connecting to Solvent Recyclers)
UDP4TA	4" Dual Diaphragm Pump (Main Pump)
UDP2TA	2" Dual Diaphragm Pump (for Flow-through Brush)
780-8120P	Clean Rinse Pail
750-815P	Overflow Tube
780-8110P	Wash Pail
780-8116F	Riser

## Full Product Warranty

These Uni-ram products have been engineered and manufactured to high performance standards. Each unit has been subjected to detailed factory testing before shipment.

This product comes with a one-year full warranty from the date of purchase. Uni-ram Corporation reserves the right to repair or replace the unit, free of charge, to the original purchaser if a part is found to be defective in material or workmanship as determined by factory service personnel. The items listed below under "Conditions of Warranty" as consumables are not covered.

Uni-ram reserves the right to direct the customer to ship the unit collect to the Uni-ram factory or to an approved Service Center for repair using the Uni-ram Return Goods Procedure or to repair the unit on-site. To prevent damage in transport, the purchaser must ship the unit in the original packaging or use alternate adequate packaging. All units must be **shipped clean and free of liquid**.

### Diaphragm Pump:

We are pleased to advise that the warranty on the diaphragm pump, the heart of the spray gun cleaner, comes with a 2 year replacement warranty. If, in the unlikely event your diaphragm pump fails during the first two years of service, call Uni-ram Service at 1-800-417-9133. We will send you a new pump free of charge and arrange for the return of your original pump.

### Conditions of Warranty:

As Uni-ram Corporation has no control over the working conditions or circumstances under which the purchaser stores, handles or uses the product, Uni-ram makes no warranty or claim, either expressed or implied with respect to this product's fitness for any purpose or the result to be obtained from its use. This condition applies to the sale of all products and no representative or distributor of Uni-ram Corporation has the authority to waive or change these conditions.

This warranty applies only to the original purchaser and does not apply if the unit has been misused, overloaded, neglected, altered or used for any purpose other than those specified in the operating and installation instructions. Deterioration due to normal wear is not covered by this warranty. Damage due to accident, transportation, fire, floods or acts of God is also not covered. Units whose serial numbers have been altered or removed are not covered. The warranty is invalid if unauthorized chemicals as noted in the manual or liquids with acid content are used in this unit. Unauthorized attempts at self-repair or alterations by the owner also invalidate this warranty. Interior or exterior finishes are not covered by this warranty.

Consumable Items are not covered by this warranty (eg: gaskets, screens, bags, filters, nozzles and air jets).

This warranty replaces all other warranties expressed or implied by statute or otherwise.

**To make a claim, call Uni-ram Service at 1-800-417-9133 and quote the serial number of the unit.**